

REMARKS

The Office Action dated June 23, 2009 has been received and carefully studied.

The Examiner maintains the rejection of claims 7, 9-13, 15 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over Isozaki et al., JP 2003-307623A. The Examiner also maintains the rejection of claims 7, 9-13, 15 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over JP 2003-307623A in view of EP '136, and claim 14 under 35 U.S. C. §103(a) as being unpatentable over JP 2003-307623A alone or in view of EP '136, and further in view of Suda et al., JP 2005-0497791 or Tanaka et al., U.S. Patent No. 6,905,640 or admitted prior art.

The rejections are respectfully traversed.

As set forth in the instant claim 7, the most significant characteristic feature of the present invention resides in the use of a water-based adhesive consisting essentially of a polyvinyl alcohol resin, a resin having a maleic anhydride skeleton in the structure which is a copolymer of maleic anhydride and isobutylene, and a crosslinking agent, for bonding a protective film to a polarizing element. More specifically, the most important feature resides in the use of the polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene.

The water-based adhesive containing the polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene enables excellent bonding of the protective film and the polarizing element. The bonding is particularly good in terms of the adhesion durability of the protective film and the polarizing element in an atmosphere of high temperature and high humidity, as stated in the instant specification at page 1, lines 5-11, page 4, line 18 to page 5, line 16, and page 34, line 5 to page 35, line 3.

Test Example 1 of the present specification demonstrates in Table 1 that the polarizers obtained using the water-based adhesive containing polyvinyl alcohol (i.e., PVA resin or modified PVA resin) and copolymer resin of maleic anhydride and isobutylene (i.e., resin having a maleic anhydride skeleton in the structure) were superior in water resistance of the adhesion when dipped in warm water at 60°C for 120 hours (see Examples 1 to 9).

On the other hand, Table 1 demonstrates that the polarizers using the water-based adhesive containing PVA resin but no resin having a maleic anhydride skeleton in the structure were poor in water resistance of the adhesion; that is, the complete separation of the protective film from the polarizing element occurred (see Comparative Example 1).

Similarly, Test Example 2 demonstrates in Table 2 that with the polarizers made using the water-based adhesive containing no resin having a maleic anhydride skeleton in the structure, separation was observed (see Comparative Example 3).

Furthermore, Test Example 3 demonstrates in Table 3 that with the polarizers made using no resin having a maleic anhydride skeleton in the structure, separation between the polarizing film and the polarizing element was observed (see Comparative Example 4).

As is clear from these experimental data, the water-based adhesive containing polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene effectively enables excellent adhesion durability between the protective film and the polarizing element.

Isozaki et al. (JP 2003-307623 A) teach the use of a layer of water-based adhesive wherein the adhesive composition comprises a polyvinyl alcohol polarizing polymer, an inorganic layered compound, and a crosslinking agent. Furthermore, Isozaki et al. teach that the polyvinyl alcohol polymer may be modified by copolymerization of an alpha olefin wherein an additional monomer also can be copolymerized with the alpha olefin. Isozaki et al. exemplify a large number of the monomers eventually including maleic anhydride. However, it is important

to note that Isozaki et al. do not exemplify isobutylene (isobutene) as the monomer; Isozaki et al. exemplify isobutylene as the alpha olefin.

Also, Isozaki et al. do not suggest the copolymer resin of maleic anhydride and isobutylene. Isozaki et al. merely exemplify maleic anhydride and isobutylene independently, and neither teach nor suggest the use of the water-based adhesive containing polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene, as required by the instant claims.

Further still, Isozaki et al. teach or suggest nothing whatsoever about the excellent adhesion durability between the protective film and the polarizing element attained by the use of the water-based adhesive containing the polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene.

Accordingly, it is believed that the present invention is nonobvious over Isozaki et al.

With respect to claims 7 and 14, EP '136 may teach that a copolymer of isobutylene with maleic anhydride is incorporated into a water-based polyvinyl alcohol adhesive composition. However, EP '136 relates to the use of the adhesive for labels to patch on glass base materials such as glass bottles, and is

thus completely irrelevant to polarizers or polarizing elements, and is non-analogous. Developers of polarizers comprising a polarizing element and a protective film bonded thereto with an adhesive would never look to the non-analogous art of labels for glass beverage bottles in attempting to solve the problems confronting them, such as adhesion durability in high temperature, high humidity conditions so that the polarizing element and protective film do not readily separate. The test articulated by the Federal Circuit to ascertain whether a reference is analogous in an obviousness determination is two tier:

- (1) determine whether the reference is within the field of the inventor's endeavor; and if not,
- (2) determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved.

*In re Deminski*, 230 U.S.P.Q. 313 (Fed. Cir. 1986). The Federal Circuit went on to say that the claimed invention and reference patents are within the same field of endeavor if they have essentially the same function and structure. In the instant case, certainly labels for glass bottles are completely unrelated to,

and do not have the same function and structure, as polarizers. Nor is EP '136 in any way pertinent to the particular problem with which the present inventors were involved, namely, providing a polarizer having a polarizing element and a protective film bonded to the polarizing element with an adhesive that has excellent durability even in high temperature, high humidity conditions. As stated in *In re Clay*, 23 U.S.P.Q.2d 1058 (Fed. Cir. 1992):

"A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection. An inventor may well have been motivated to consider the reference when making his invention. If it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it."

The EP '136 reference discloses adhesive compositions that are useful for affixing labels, such as paper labels, to glass beverage bottles, and are said to have excellent cold water resistance. The problems associated with this technology have absolutely no relevance to the particular problem with which the present inventors were involved. Accordingly, applicants

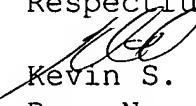
respectfully submit that a person having ordinary skill in the art would not have consulted EP '136 when faced with the problems associated with adhering protective films on polarizing elements. As stated in *Jurgens v. McKasy*, 18 U.S.P.Q.2d 1031, 1036 (Fed. Cir. 1991), if a cited reference "is not analogous art, it has no bearing on the obviousness of the patent claim."

Suda et al. neither teach nor suggest the use of water-based adhesives containing polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene, as required by the instant claims.

Tanaka et al. relate to a method of aligning liquid crystal compounds, and therefore have not relation to the present invention. Tanaka et al. also neither teach nor suggest the use of water-based adhesives containing polyvinyl alcohol resin in combination with the copolymer resin of maleic anhydride and isobutylene, as required by the instant claims.

Reconsideration and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

  
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